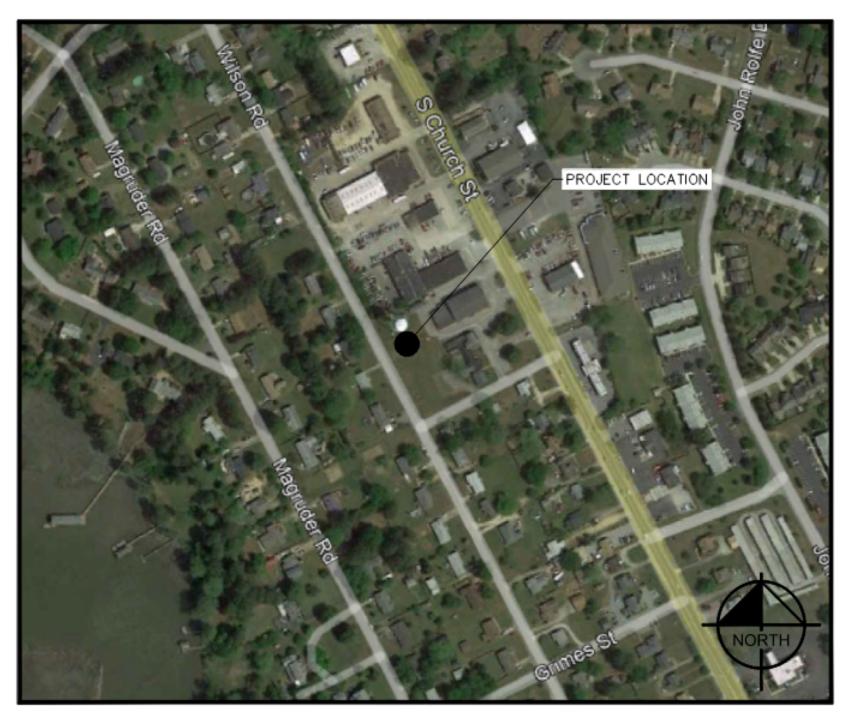
# DEPARTMENT OF PUBLIC WORKS & UTILITIES TOWN OF SMITHFIELD, VIRGINIA

## WILSON ROAD WATER TANK REHABILITATION

IFB # 22-001 FEBRUARY 2022



PROJECT SITE

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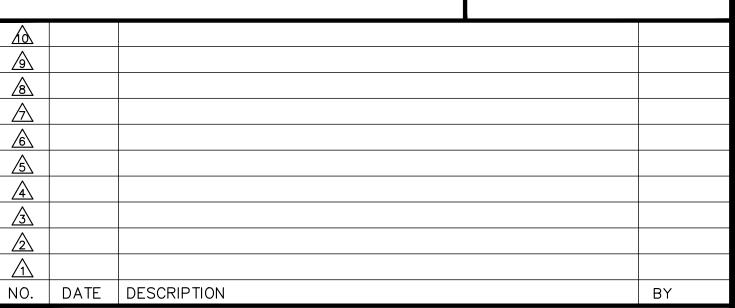
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116499029 - WILSON WATER TANK REHAB\CADD\PLANSHEETS\C01 - COVER

DATE:

#### FEBRUARY 2022

JOB NUMBER: 116499029



**REVISIONS** 

#### SEQUENCE OF CONSTRUCTION:

- 1. OBTAIN APPROPRIATE CONSTRUCTION PERMITS. COORDINATE WITH ELECTRICAL POWER SUPPLIER TO PROVIDE INSULATING PROTECTIVE LAYERS
- 2. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE TOWN OF SMITHFIELD (TOWN) AND ENGINEER IMMEDIATELY FOLLOWIN NOTICE TO PROCEED.
- 3. COORDINATE WITH THE TOWN FOR POTABLE WATER USE WHILE TANK IS OUT OF SERVICE AND TO CONFIRM OPERABILITY OF VALVES FOR SHUTDOWNS.
- 4. COORDINATE WITH TOWN TO RELOCATE EXISTING SCADA COMMUNICATION EQUIPMENT TO A TEMPORARY MOUNT. CONTRACTOR TO COORDINATE WITH TOWN TO OPERATE TANK BOWL DRAIN VALVE AND TO SHUT OFF ELECTRICAL SERVICE PRIOR TO STRUCTURAL AND ELECTRICAL OPERATIONS. ALL EXISTING VALVES AND ELECTRICAL PANELS SHALL BE OPERATED BY THE TOWN.
- 5. COMPLETE INTERIOR AND EXTERIOR STRUCTURAL IMPROVEMENTS.
- 6. PERFORM SAND BLASTING OPERATIONS TO REMOVE EXISTING COATS OF PAINT.
- 7. COMPLETE INTERIOR WET PAINTING OPERATIONS AND REPLACE THE DRAIN, FILL LINE, AND ALTITUDE VALVES.
- 8. INSTALL PAINT SHROUD NO LESS THAN 2 DAYS PRIOR TO EXTERNAL SAND BLASTING, PAINT SHROUD INSTALLATION SHALL BE APPROVED BY TOWN BEFORE COMMENCING WORK.
- 9. COMPLETE EXTERIOR SAND BLASTING OPERATIONS TO REMOVE EXISTING COATS OF LEAD BASED PAINT.
- 10. COMPLETE EXTERIOR PAINTING OPERATIONS.
- 11. PERFORM PRIMARY VALVE VAULT AND DRAIN VAULT WORK.
- 12. UPON TOWN ACCEPTANCE OF EXTERIOR PAINT WORK, REMOVE PAINT SHROUD. REPLACE AVIATION LIGHTS AND REINSTALL EXISTING SCADA COMMUNICATION EQUIPMENT.
- 13. DISINFECT TANK BOWL INTERIOR WALLS. RETURN ELECTRICAL AND WATER SERVICE. ALL EXISTING VALVES AND ELECTRICAL PANELS SHALL BE OPERATED BY THE TOWN.
- 14. REPLACE THE EXISTING SITE FENCE AND GATES WITH NEW 8" TALL, BLACK, VINYL COATED CHAIN LINK FENCING AND GATES.
- 15. COMPLETE NECESSARY PROPERTY RESTORATION.

#### GENERAL NOTES:

- 1. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION, ELEVATION, ORIENTATION, DIMENSIONS, MATERIALS, ETC. OF EXISTING MATERIAL PRIOR TO ORDERING MATERIAL.
- 2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
- 3. AVIATION LIGHTS SHALL REMAIN IN SERVICE AND ACTIVE DURING THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL SUBMIT TO THE TOWN A PLAN TO PROTECT AND MAINTAIN SERVICE TO THE EXISTING AVIATION LIGHTS UNTIL IMMEDIATELY PRIOR TO REPLACEMENT. CONTRACTOR SHALL ENSURE THAT THE CABLES DO NOT PRESENT A TRIP HAZARD.
- 4. CONTRACTOR TO ENSURE SCADA COMMUNICATION REMAINS ACTIVE DURING THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL SUBMIT TO THE TOWN A PLAN TO PROTECT AND MAINTAIN SERVICE TO THE EXISTING ANTENNA BY PLACING IT ON A TEMPORARY MOUNT AT A HEIGHT ABOVE THE PAINT SHROUD AND PROTECTING THE EXPOSED CABLES FROM ABRASIVE BLASTING. CONTRACTOR SHALL ALSO REMOVE EXISTING INACTIVE ANTENNAS AND ASSOCIATED CABLES AND DISPOSE OF THEM. CONTRACTOR SHALL REINSTALL THE SCADA ANTENNA AFTER EXTERIOR COATING IS COMPLETED AND ENSURE THE CABLES DO NOT PRESENT A TRIP HAZARD.

#### **PUBLIC WORKS & UTILITIES**

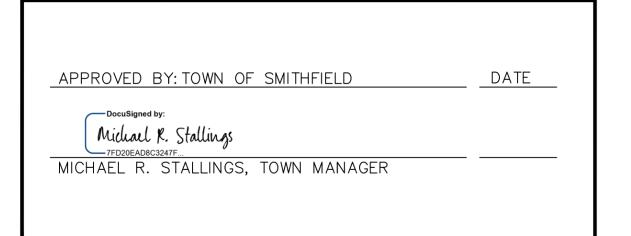
TOWN OF SMITHFIELD
310 INSITUTE ST
SMITHFIELD, VIRGINIA 23430
(757) 365-4200
CONTACT: JACK REED, DIRECTOR OF PUBLIC WORKS & UTILITIES

#### **ENGINEER**

KIMLEY-HORN & ASSOCIATES, INC. 11818 ROCK LANDING DRIVE, SUITE 100 NEWPORT NEWS, VA 23606 (757) 213-8600 CONTACT: JAMIE WEIST, P.E.

#### **INSPECTOR**

QUINN CONSULTING SERVICES, INC. 10500 WAKEMAN DRIVE, SUITE 100 FREDERICKSBURG, VA 22407 (540) 850-0435 CONTACT: WILLIAM PYBUS



SHEET INDEX		
SHEET NUMBER	SHEET TITLE	
C01	COVER	
C02	TANK NOTES AND OVERVIEW	
C03	VAULT NOTES AND OVERVIEW	
C04	AS-BUILTS	

RESERVED FOR TOWN USE

Kimley» Horn

11818 ROCK LANDING DRIVE, SUITE 100, NEWPORT NEWS, VA 23606
PHONE: 757-213-8600

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PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CALL

"MISS UTILITY"

OF VIRGINIA

DIAL - 811

FOR LOCATION OF UNDERGROUND UTILITIES

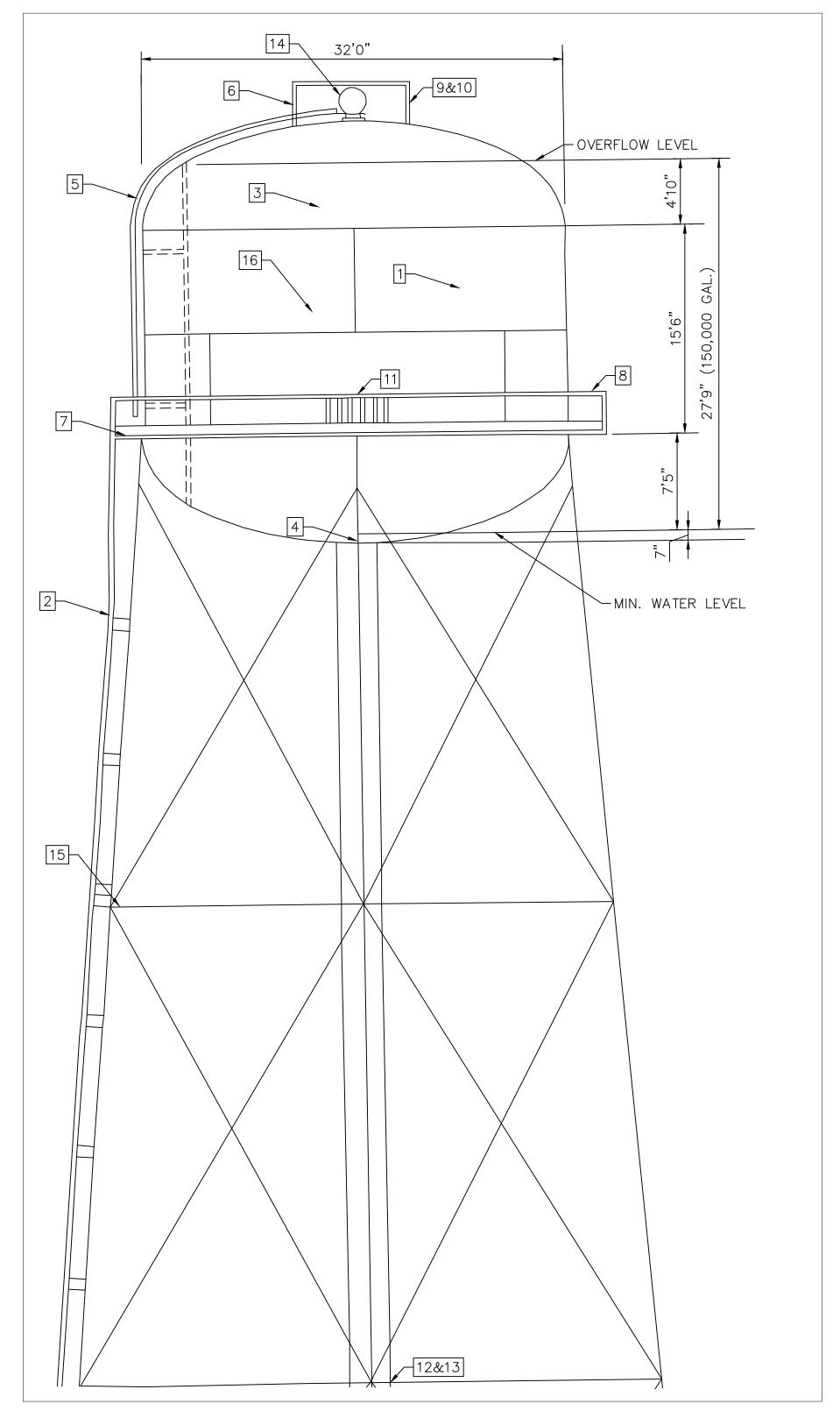


FLUOROURETHANE ÚSED. THE OWNER SHALL APPROVE THE FINAL COLORS AND SIZE FOR THE

LOGO PLACEMENT

SCALE: NTS

11	NOTE KE	
<u>#</u> 1	REPLACE INTERIOR AND EXTERIOR COATINGS	NOTES  INSPECTION REPORT STATES EXTERIOR COATING IS LEAD BASED. SEE SPECIFICAT SECTION 099100 FOR DETAILS
2	INSTALL ISOLATION GASKET MATERIALS AT THE CABLE SAFETY CLIMB ATTACHMENT POINTS WITH THE CARBON STEEL LADDER RUNGS (RESERVOIR AND WET RISER). REPLACE ANY CORRODED ATTACHMENT NUTS/BOLTS.	
3	WELD ANY PITS WITH DEPTHS GREATER THAN 10% OF THE PLATE THICKNESS IN THE TANK BOWL PLATES AND RISER SURFACES BELOW THE HIGH WATER LEVEL. REPAIR TANK SURFACE BY WELDING AND GRINDING.	SEE SPECIFICATION SECTION 099100 FO DETAILS
4	REPLACE THE GASKET FOR THE ROUND, SHELL PRESSURE STYLE MANWAY LOCATED IN THE LOWEST CAN SECTION OF THE WET RISER. INSTALL TWO HORIZONTAL SLOT OPENINGS (1"X4") IN THE WET RISER MUD RING EXTENSION AT THE TANK BOWL OPENING.	
5	MODIFY EXISTING SHELL/ROOF STANDOFFS TO INCREASE LADDER'S FOOT CLEARANCE ALONG UPPER SHELL AND ROOF KNUCKLE TO BE COMPLIANT WITH CURRENT OSHA REGULATIONS.	
6	REROUTE THE ROOF HANDRAIL ANTENNA CABLE TO THE UNDERSIDE OF THE BALCONY PLATFORM AND UP THROUGH NEW PENETRATION OPENING AND UP THE SHELL AND ROOF TO THE EXISTING ANTENNA BY ATTACHMENT TO NEW SUPPORT BRACKETS. REROUTE ALL ANTENNA CABLES TO SEPARATE SUPPORT BRACKETS AS TO NOT BE CONNECTED TO ANY LADDERS AND OFF THE FLOOR PLATFORM TO AVOID A TRIPPING HAZARD AS REQUIRED BY OSHA.	
7	RELOCATE THE TWO (2) ANTENNA ASSEMBLIES CURRENTLY ATTACHED TO EITHER SIDE OF THE BALCONY STEP—THROUGH OPENING FROM THE INSIDE FACE OF THE BALCONY HANDRAIL TO NEW SUPPORT BRACKETS ON THE OUTSIDE OF THE HANDRAIL THAT DO NOT INTRUDE INTO THE WALKWAY SPACE. RELOCATE ANTENNA CABLES FROM CROSSING THE LADDER/BALCONY STEP—THROUGH OPENING.	CONTRACTOR TO COORDINATE WITH TOW STAFF TO ENSURE SCADA REMAINS OPERATIONAL DURING CONSTRUCTION. COORDINATION REQUIRED WHILE RELOCATI TO TEMPORARY MOUNT AND WHEN RELOCATING TO PERMANENT MOUNT.
8	INSTALL A FLAT-BAR RAIL ON EXISTING BALCONY HANDRAIL MIDWAY BETWEEN THE TOPRAIL AND MIDRAIL TO MEET CURRENT OSHA SPACING REQUIREMENTS.	
9	INSTALL A FLAT-BAR RAIL ON EXISTING CIRCULAR ROOF HANDRAIL MIDWAY BETWEEN THE MIDRAIL AND TOP EDGE OF THE TOE-PLATE BY SEAL WELDING THE FLAT-BAR TO THE EXISTING HANDRAIL POSTS TO MEET CURRENT OSHA SPACING REQUIREMENTS.	
10	INSTALL A FLAT-BAR RAIL ON THE EXISTING CIRCULAR ROOF HANDRAIL MIDWAY BETWEEN THE TOPRAIL AND MIDRAIL BY SEAL WELDING THE FLAT-BAR TO THE EXISTING HANDRAIL POSTS TO MEET CURRENT OSHA SPACING REQUIREMENTS.	
11	INSTALL NEW ATTACHMENTS BRACKETS TO THE BALCONY HANDRAIL POSTS AND RELOCATE THE AVIATION OBSTRUCTION LIGHT SYSTEM FIXTURES FROM THE TOPRAIL IN ACCORDANCE WITH OSHA REGULATIONS. ELECTRICAL POWER CABLE SHOULD BE ROUTED TO SUPPORT BRACKETS ON THE UNDERSIDE OF THE BALCONY PLATFORM. REPLACE AVIATION LIGHTS WITH LED LIGHTS.	NEW LED OBSTRUCTION LIGHTS TO BE INSTALLED PER FAA ADVISORY CIRCULA 150/5345-43J SPECIFICATIONS FOR OBSTRUCTION LIGHTING EQUIPMENT.
12	ANY CRACKED, LOOSE, OR MISSING GROUT UNDER THE BASE PLATES OF ALL THE SUPPORT COLUMNS AND OF THE WET RISER, AS WELL AS CONCRETE FOUNDATION DEFECTS SHOULD BE REMOVED BACK TO SOUND CONCRETE AND REPAIRED WITH NON-SHRINK 3000 PSI GROUT.	SEE SPECIFICATION SECTION 03732 FOR DETAILS
13	EPOXY CAULK THE GAP AREA OF THE SUPPORT COLUMN ANCHOR BOLTS/NUTS.	
14	REPLACE EXISTING VENT WITH 24" FROST FREE ALUMINUM VENT.	
15	REMOVE AND DISPOSE OF EXISTING SIREN	
16	PERFORM WASHDOWN, DISINFECTION, AND TESTING PRIOR TO RETURNING TANK TO SERVICE. COORDINATE WITH TOWN.	





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LOGOS FROM THE CONTRACTOR'S MOCK-UP BOARD.

REPARED IN THE OFFICE OF:

Kimley» Horn

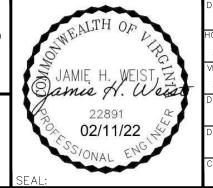
18 ROCK LANDING DRIVE, SUITE 100, NEWPORT NEWS, VA 2360
PHONE: 757-213-8600

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### DEPT. OF PUBLIC WORKS & UTILITIES TOWN OF SMITHFIELD, VA

PROJECT:

WILSON ROAD WATER TANK REHABILITATION



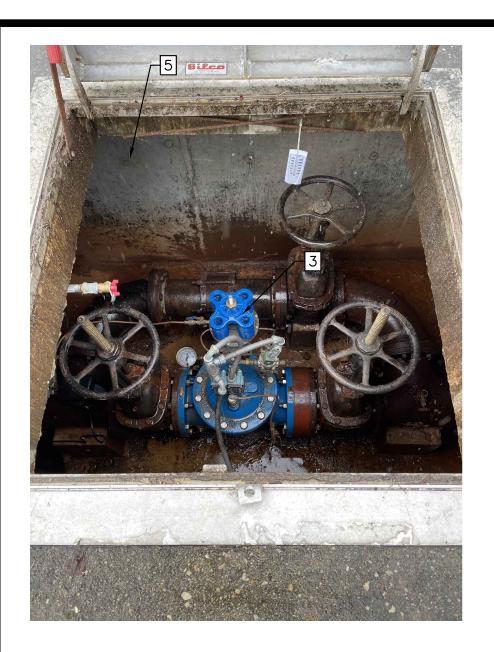
FEB 2022
HORIZONTAL SCALE:
AS SHOWN
VERTICAL SCALE:
AS SHOWN
DRAWN BY:
NLR
DESIGNED BY:
NLR
CHECKED BY:

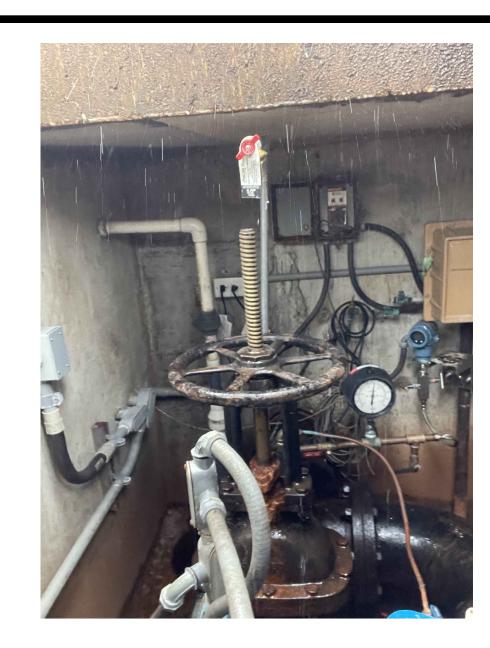
TANK NOTES AND OVERVIEW

C02

EET NUMBER:
2 of 4

B NUMBER:
116499029





NOTE KEY				
#	ITEM	NOTES		
1	REPLACE EXISTING HEATER SYSTEM IN PRIMARY VALVE VAULT.			
2	REPLACE PRIMARY VALVE VAULT SUMP PUMP AND ASSOCIATED 1.5" DIAMETER PIPING. ROUTE PIPING TO DITCH AT ROADWAY.			
3	REPLACE ALL 8" DUCTILE IRON PIPING AND RESTRAINTS TO MATCH EXISTING TO EXISTING FLANGES IN PRIMARY VALVE VAULT. COAT PIPING SYSTEM.	INSPECTION REPORT STATES EXISTING PIPING COATING SYSTEM SHOULD BE TREATED AS LEAD BASED. CONTRACTOR TO VERIFY DIAMETER PRIOR TO PURCHASING MATERIALS. SEE SPECIFICATION SECTION 099200 FOR DETAILS.		
4	REPLACE THREE 8" GATE VALVES, 8" ALTITUDE VALVE, AND PRESSURE TRANSDUCER IN PRIMARY VALVE VAULT.	CONTRACTOR TO VERIFY DIAMETER PRIOR TO PURCHASING MATERIALS. SEE SPECIFICATION SECTION 099200 FOR DETAILS.		
5	CLEAN AND RECOAT INTERIOR WALLS OF PRIMARY VALVE VAULT.	SEE SPECIFICATION SECTION 099200 FOR DETAILS.		
6	REPLACE PRIMARY VALVE VAULT HATCH WITH 45"X45" ALUMINUM BILCO HATCH.			
7	REPLACE TWO 8" GATE VALVES IN TANK DRAIN VAULT.	CONTRACTOR TO VERIFY DIAMETER PRIOR TO PURCHASING MATERIALS.		
8	CLEAN AND RECOAT INTERIOR PIPING AND WALLS OF DRAIN VAULT.	SEE SPECIFICATION SECTION 099200 FOR DETAILS.		
9	REPLACE DRAIN VAULT HATCH WITH 24"X24" ALUMINUM BILCO HATCH.			
10	REPLACE THE EXISTING SITE FENCE, GATE AND PEDESTRIAN GATE WITH NEW 8' TALL, BLACK, VINYL COATED CHAIN LINK FENCE AND GATES.			

#### NOTE

- 1. PLANIMETRIC FEATURES ARE BASED ON LATEST AVAILABLE DATA. THE ENGINEER CANNOT CONFIRM THE LOCATION OR EXISTENCE OF PLANIMETRIC FEATURES SHOWN
- IN THESE DRAWINGS.

  2. AERIAL DATA WAS PROVIDED BY GOOGLE EARTH PRO AND WAS OBTAINED ON JANUARY 11, 2022.











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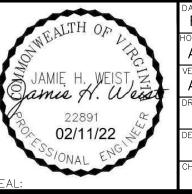
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TOWN OF SMITHFIELD, VA

PROJECT:

WILSON ROAD WATER TANK REHABILITATION



DATE:
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HORIZONTAL SCALE:
AS SHOWN
VERTICAL SCALE:
AS SHOWN
DRAWN BY:
NLR
DESIGNED BY:
NLR
CHECKED BY:
JHW

VAULT NOTES AND OVERVIEW

C03

EET NUMBER:
3 OF

SHEET NUMBER: **3** OF **4**JOB NUMBER: 116499029

